Met One Instruments

CASE STUDY

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>
> —Wes Perkins, Product Manager at Met One Instruments.

BREATHE EASIER IN YOUR COMMUNITY WITH MET ONE INSTRUMENTS CONNECTED BY NEO

THE PROBLEM WITH THE AIR WE BREATHE

Poor air quality contributes to premature death, cancer, and long-term damage to respiratory and cardiovascular systems. While pollution from factories, operating facilities, and other toxic deposits can be hard to identify, natural disasters and wild fires can also have a detrimental effect on air quality. To keep people safe in their communities, air quality monitors are put in place to notify us when we need to stay indoors or to help create policies and laws regulating factory deposits.

THE NEIGHBORHOOD AIR MONITOR AND HOW IT WORKS

The Neighborhood Air Monitor from Met One Instruments uses a small, laser light-scattering engine to measure pollution levels in the air. It then sends the data to a server and automatically displays the readings in real time on a webpage. The U.S. Environmental Protection Agency (EPA) has ordered multiple units and is considering deploying a large, dense network of these low-cost air quality monitors in communities around the United States. But this couldn't have happened without Neo, powered by Aeris.

THE CHALLENGE: KEEPING AIR MONITORING COSTS LOW

While trying to keep the cost low enough for communities and neighborhood groups to afford, the Neighborhood Air Monitor also needed ease of installation and activation to allow for its mass adoption. Finally, to make the biggest impact, the Neighborhood Air Monitor needed to get the measured data from the device out to the public quickly, easily, and without a large monthly bill. Met One Instruments faced three main problems in making its application more economical, including:

- Traditional air quality monitoring stations are expensive, often costing $50,000 or more.
- These systems require highly trained personnel to operate and install, which can take days to weeks.
- Monthly costs to maintain the equipment and transmit data can cost hundreds of dollars per month.

These factors limited the ability to measure air quality for government agencies and reduced the number of large industries with money to invest and highly technical personnel

to assign. This resulted in fewer air quality monitoring stations operating in the U.S., so while residents might know the average air quality of their city, but they may not know how badly the factory next to an elementary school was affecting students' health or whether the busy highway near a subdivision was changing the air residents breathed at home every day.

THE SOLUTION: A ONE-STOP-SHOP FOR CONNECTIVITY AND DATA COLLECTION

By choosing Neo's cellular data service, Met One can transmit real time air quality readings wirelessly from the Neighborhood Air Monitors to a cloud service, where the data is displayed to the public via a webpage. "The super low cost of the Neo service allows Met One to give away years of data connectivity with every device and offer affordable renewals," said Wes Perkins, product manager at Met One Instruments. "It's also easy to provision and deploy new devices, which prevents the end user from having to undertake complicated activations as with traditional carrier data plans."

THE RESULT: KEEPING COMMUNITIES INFORMED ABOUT AIR QUALITY

While the Neighborhood Air Monitor is a new product, feedback from users has been outstanding. The selling price is a fraction of the cost of a traditional air monitoring station, installation can be performed by any non-technical person in less than 5 minutes, and readings appear on the website within minutes of deployment with no monthly costs to the end user.

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NEO

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